

T.I.E.
ALPHA 200

Owner's Manual :: 2-17

GB

Mode d'emploi :: 18-33

F

Manual del usuario :: 34-49

E

Gebruikers gids :: 50-73

NL

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TUNTURI®
THE MOTOR – *it's you.*

DEAR TUNTURI OWNER

Welcome to the world of Tunturi exercising!

Your choice shows that you really want to invest in your well-being and condition; it also shows you really value high quality and style. With Tunturi Fitness Equipment, you've chosen a high-quality, safe and motivating product as your training partner.

Tunturi developed Interactive Electronics (T.I.E.) represent the absolute pinnacle in exercise equipment. T.I.E. offers you a whole new kind of meter, a user interface that combines individual, versatile and motivational features of exercising.

Alpha 200 T.I.E. user interface is specially developed for Tunturi ergometers to offer you many motivating forms of exercise. You can test your fitness, design your own exercise profiles, and use e.g. constant effort and heart-rate programs. There are also several pre-programmed exercise profiles, each with a different goal. Whatever your goal in training, we are certain this is the training equipment to get you there.

This guide is an essential part of your exercise equipment. Start familiarising yourself with the Tunturi T.I.E. interface by carefully reading this manual. It offers the information you need for both the use and maintenance of your equipment. This manual is well worth keeping, as you may need these instructions later on.

1. INSTALLATION ::

- 1.1 Turning the user interface on and off

2. KEYS ::

- 2.1 Function keys
- 2.2 Operation keys
- 2.3 Setting keys
- 2.4 Brake keys

3. HEART-RATE AND PULSE MEASUREMENT ::

- 3.1 Measurement with a heart-rate belt
- 3.2 Measurement with an ear sensor

4. FUNCTIONS :: EXTRA

5. FUNCTIONS :: TRAINING

- 5.1 Training exercise
- 5.2 Individual displays for exercise values

6. FUNCTIONS :: COACH

- 6.1 Fitness Test
- 6.2 Exercise Profiles

7. MAINTENANCE ::

1. INSTALLATION ::

Push the T.I.E. interface module carefully into place at the top of the handlebar support tube. The loose screws hanging from the metal fastening plate on the bottom of the T.I.E. module must enter the holes at the top end of the handlebar. Make sure that the module is correctly in place and tighten the fastening screws.



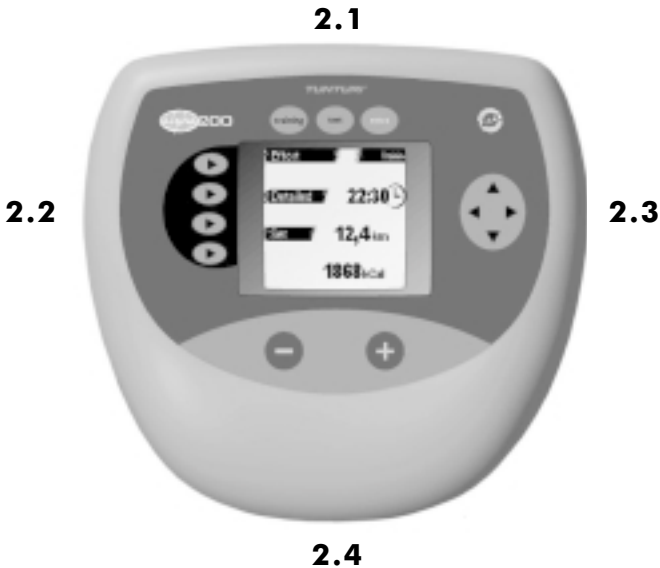
1.1 Turning the user interface on and off

The user interface turns itself on when the device is connected to the mains current. When the user interface has not been used for five minutes (no heart-rate registered, no keys pressed, no pedalling), it automatically switches itself to energy-saver state. Alpha 200 is returned to its active state by pressing any key, starting to pedal or sending heart-rate signals to the unit. When you restart, Alpha 200 automatically starts from Training function.

- :: **Protect Alpha 200 from excess sunlight, because that may fade the interface box and surface membrane colours. Please also be careful not to allow Alpha 200 to come into contact with water. A sharp blow may damage the interface.**
- :: **You can set your language in the Extra function.**

2. KEYS ::

Once you have installed Alpha 200 and connected your exercise equipment to a power source, you can start getting to know the interface. Please read this guide carefully, and do try experimenting to find out for yourself what Alpha 200 can do. Feel free to try the functions and settings - T.I.E. user interfaces are made to be used!



2.1 Function keys

Function keys are located above the display.

Training is the basic exercise function. Training offers three modes of exercise suited to goal-oriented and simultaneously safe training: constant resistance, constant effort and constant heart-rate.

Coach offers you a fitness test and pre-programmed exercise profiles. It also helps you create and save your own exercise profiles.

Extra function is for settings and adjustments to Alpha 200 properties.

2.2 Operation keys

Operation keys are used to direct a particular function and are located to the left of the display. When an operation key is active, an info-label is displayed to the right of the key.

2.3 Setting keys

Setting keys are situated to the right of the display. They are used to set the values and characters on-screen. Symbols on the display for the active arrow keys show which you can use to adjust values or navigate.

2.4 Brake keys

The brake keys (+/-) are located beneath the display. They are used to adjust resistance during constant brake and constant effort workouts in Training function.

3. HEART-RATE AND PULSE MEASUREMENT ::

3.1 Measurement with a heart-rate belt



1. Attach the transmitter to the elastic strap.

2. Adjust the length of the strap to fit snugly and comfortably.



3. Pull the transmitter away from your chest and wet the grooved areas at its back.

4. Check the wet electrodes are uniformly positioned next to your skin and that the Polar logo is central and upright.



The heart-rate belt works best when the transmitter is worn against your bare skin. If you prefer to wear it over a shirt, please moisten the shirt well under the electrodes: the contacts must be wet while you exercise.

Take good care of the transmitter after you exercise. This helps to prolong the life of the electrodes and battery.

1. Wash the transmitter carefully with a mild soap-water solution.
2. Rinse with clean water.
3. Dry the transmitter carefully.

3.2 Measurement with an ear sensor

You can buy the ear sensor needed for pulse measurement from your Tunturi dealer or importer as an accessory.

Measure your pulse as follows:

1. Open the cover at the back of Alpha 200 and pushing the ear sensor connector into the interface connector. Lead the ear sensor wire out through the hole between the cover and the box, and close the cover.
2. Attach the ear sensor to the earlobe.
3. Attach the sensor wire to your shirt with the clip provided. This prevents the sensor and wire from moving.



If there are problems in pulse measurement:

- :: Check how the sensor works while not pedalling.
- :: A disturbance may be caused by the physiological properties of the earlobe. Try measuring on the inside surface of the ear or on the tip of your finger.
- :: Rub the earlobe with your fingers to quicken circulation.
- :: If pulse values rise above 150 beats/min., earlobe measurement may be affected by the faster circulation.
- :: Sometimes a strong light source in the immediate vicinity of the user may cause disturbances.

Please clean the ear sensor after use with a damp cloth. Do not use solvents.

NOTE! Always detach the ear sensor connector from the user interface when you use the heart-rate belt. The ear sensor disturbs heart-rate measurement.

4. FUNCTIONS :: EXTRA

The Extra function helps you make adjustments to Alpha 200 properties. You can also update Alpha 200 software in Extra.

1. Press function key Extra.
2. Press Settings key.
 - :: You can select the Alpha 200 language with the left/right setting keys. The factory default setting is English. You can proceed to the brightness setting with the up/down setting keys.
 - :: Use the left/right setting keys to make any adjustment. You can adjust display brightness on a scale 0-7, where 0 is the darkest.
 - :: Press OK key to confirm your settings.
3. SW key is for software updates.
 - :: **NOTE!** Do not press the SW key unless you are updating your Alpha 200 software.

5. FUNCTIONS :: TRAINING

Training function offers three different modes of exercise: constant resistance, constant effort and constant heart-rate. Setting a fixed requirement level is similar in all programs, after which your Tunturi exercise equipment automatically ensures that the resistance level remains as set.

The main display has two viewing options: the first option allows you to view training duration, estimated energy consumption and distance, the second option allows you to see values for heart-rate, rpm and watt. You can change the view by pressing the left/right setting keys.

- :: **If you experience nausea, dizziness or other abnormal symptoms while exercising, stop your workout at once and consult a physician.**
- :: **Constant heart-rate exercise requires your using the heart-rate measurement system. We recommend the heart-rate belt.**

5.1 Training exercise

1. Press the Training function key.
2. Select the mode of exercise with the Mode key:
 - :: Brake = constant resistance exercise at the same resistance level throughout. Faster pedalling means an increase in effort.
 - :: W = constant effort exercise; Alpha 200 adjusts resistance automatically so the training effort set, e.g. 100 W, remains the same independent of pedalling rate.
 - :: Heart = constant heart-rate exercise; Alpha 200 adjusts effort automatically and keeps your heart-rate at the desired level e.g. 120 beats per minute, independent of pedalling rate.
3. In constant resistance and constant effort exercises, set the constant value with the brake keys +/-, and in constant heart-rate exercise use the up/down setting keys.
4. Use Set key to establish target values for your exercise.
 - :: Select the target values set-up display with the left/right setting keys and then press OK key. The left/right setting keys select the Target values you want to adjust and the up/down keys

set training target values. These values are training duration (0.01 - 10.0 hrs), distance (0.1 - 200 km) and energy consumption (1 - 5999 kcal). You can set more than one target value for your exercise session. Pressing the key longer makes the values change faster.

:: Press OK key to confirm your settings. Press Back key to cancel the settings made.

5. Use Set key to establish units of measurement for your exercise.



:: Select Units with the up/down setting keys and then press OK key. Set the units with the up/down setting keys and navigate with the left/right keys. You can set weight and distance measures either to metric or avoirdupois (kg, km / pounds, miles), and speed to either kilometers per hour (km/h), miles per hour (mph) or revolutions per minute (rpm).

:: Press OK key to confirm your settings. Press Back key to cancel the settings made.

6. You can adjust all the set values during the exercise, both constant and target. Make these adjustments the same way you set the values up.

:: Reset key resets your target values and cumulative training values.

5.2 Individual displays for exercise values

To monitor one of the values more closely, first press key . Then press the left/right setting key again to move from one individual value display to another. Return to the main display by pressing the key .

6. FUNCTIONS :: COACH

Coach offers you several different training programs that make exercising interesting, motivating and effective. You can choose from two guided exercise alternatives: 3-Step test and Profiles.

- :: **If you feel any nausea, dizziness or other abnormal symptoms, always stop exercising immediately and consult a physician.**

6.1 Fitness Test

Doing the Fitness Test will help you discover your Fitness Index value.

- :: **The Fitness Test requires your using the heart-rate measurement system. We recommend the heart-rate belt.**
- :: **If there is any break in heart-rate measurement during the test, Alpha 200 interrupts the test and displays a message on-screen.**
- :: **If your pedalling rate drops below 30 rpm, Alpha 200 interrupts the test and displays a message on-screen.**

Alpha 200 uses the 3-Step Test recommended by the World Health Organisation (WHO) and popular throughout the world for its safety and precision. The 3-Step Test is a so-called indirect test that measures your fitness level from a combination of different effort levels and corresponding heart-rate levels. Alpha 200 uses the following formulae for calculating the maximum heart-rate level: women $226 - \text{age}$, men $220 - \text{age}$. The test itself lasts for 12 minutes during which the effort level rises three times. There is also a four-minute warm-up period and a voluntary, four-minute cool-down.

Alpha 200 uses the results to calculate maximal oxygen intake capacity and creates an aerobic fitness index. The result is shown in ml/kg/min; e.g. an index value of 40 means that in a maximal performance the exerciser consumes 40 millilitres of oxygen per minute per each kilo of body weight. In order for you to have as clear a picture of your condition as possible, Alpha 200 analyses your performance more closely.

The table you can see here shows typical 3-Step Fitness Test results for a range of users of different ages (ml/min/kg).

Men	1	2	3	4	5
FITNESS	Very poor	Poor	Average	Good	Very good
AGE					
25-29	33 or less	34-41	42-48	49-56	57 or more
30-34	31 "	32-39	40-46	47-54	55 "
35-39	30 "	31-37	38-45	46-52	53 "
40-44	28 "	29-35	36-43	44-50	51 "
45-49	27 "	28-34	35-42	43-48	49 "
50-54	26 "	27-32	33-40	41-47	48 "
55-59	25 "	26-31	32-39	40-46	47 "
> 60	23 "	24-29	30-36	37-42	43 "

Women	1	2	3	4	5
FITNESS	Very poor	Poor	Average	Good	Very good
AGE					
25-29	28 or less	29-34	35-39	40-47	48 or more
30-34	27 "	28-33	34-38	39-45	46 "
35-39	26 "	27-32	33-37	38-43	44 "
40-44	25 "	26-31	32-36	37-42	43 "
45-49	25 "	26-30	31-35	36-41	42 "
50-54	24 "	25-29	30-34	35-40	41 "
55-59	23 "	24-27	28-32	33-39	40 "

Doing the Fitness Test

1. Press function key Coach.
2. Use the up/down setting keys to select the 3-Step Test and confirm your choice by pressing OK key.
 - :: Press OK key to page through the displays that precede the test, the Back key will always return you to the previous display.
3. Please acquaint yourself fully with the test instructions. The test will be based on your basic data: enter your data (sex, age, weight) with the left/right setting keys and navigate with the up/down setting keys.
4. Press Start key to begin the Fitness Test. The test begins with a warm-up period, the actual test begins automatically as the warm-up period ends. The WHO test is made up of three four-minute periods. Pedalling resistance increases as you move to the next step; you nevertheless need to keep your pedalling rate at no less than 60 rpm. The test ends after the third period. We recommend you keep pedalling for the warm-down period, so that your heart-rate returns to normal.
5. When the test ends, the top operation key becomes active. Press this Results key and Alpha 200 gives the following information with regard to your fitness:
 - :: the measured heart-rate level at the end of every test step
 - :: the maximal oxygen intake capacity (VO₂ max.) and the corresponding aerobic fitness index value
 - :: fitness evaluation on scale 1-5 (5 = best)

6.2 Exercise Profiles

Another form of exercise offered in Coach function is based on individual, separate workouts, or exercise profiles. Operation key Profiles allows you access to use and edit pre-programmed exercise profiles, in which the resistance level varies in a pre-determined way. You can also design your own profiles and store them to be used later.

Pre-programed profiles

1. Press function key Coach.
2. Use the up/down setting keys to select the Profiles.
:: Press OK to confirm.
3. Use the up/down setting keys to select Library profiles.
:: Press OK to confirm.
4. Alpha 200 displays names of pre-programed profiles. Use the up/down setting keys to select a workout; your selection is highlighted with a darkened background.
:: Press OK to confirm your selection.
5. A profile appears on the display. Constant effort profiles are displayed as a series of vertical bars, constant heart-rate programs are displayed as a single line.
:: Change the resistance level with the up/down setting keys: the percentage value beneath the column shows what kinds of change you have made. The profiles also show a scale of effort limits in watts or beats per minute. Use the left/right setting keys to access exercise duration adjustment and the up/down keys to set the duration.
6. Press Start key to begin the exercise. The black bar in the on-screen profile indicates which stage of the exercise you are at. With the Back key you can finish the exercise.

Own exercise profiles

You can save three self-designed profiles.

1. Press function key Coach.
2. Use the up/down setting keys to select the Profiles.
:: Press OK to confirm.
3. Use the up/down setting keys to select Own profiles.
:: Press OK to confirm.

4. Three memory positions are displayed. Use the up/down setting keys to select one of them.
:: Press Edit key to confirm your choice. A flat, modifiable profile is then displayed.
5. Select the mode of exercise by pressing the Mode key: constant effort profiles are displayed as a series of vertical bars, constant heart-rate programs are displayed as a single line.
6. Use the left/right setting keys to move the black cursor bar to the position you want to edit. Use the up/down keys to do the editing. Effort levels are shown beside the profile; the numeric value below the cursor bar indicates the level of effort the position of the bar represents.
:: Press OK key to save your new exercise profile, with the Clear key to delete the profile you designed.

If you need to edit your exercise profile design, select the profile in question and edit it in the same way you set it up.

Training with your own exercise profiles

You can use your own exercise profiles as a basis for your exercising as follows:

1. Use the up/down setting keys to select a profile.
:: Press OK key to confirm your choice.
2. Use the left/right setting keys to move to exercise duration set-up (default 30 minutes) and fix workout duration with the up/down keys.
3. Press Start key to confirm your set-up and begin the exercise and Back key to finish it.

7. MAINTENANCE ::

- :: In training, T.I.E. interface tolerates an environment measuring +10°C to +35°C. A T.I.E. interface can be stored in temperatures ranging between -15°C and +40°C. Air humidity in the T.I.E. interface training or storage environment must never exceed 90 %.
- :: Press the keys with the tip of the finger; your nails may damage the key membrane.
- :: Do not let the T.I.E. interface come into contact with water. Always dry the surface of the interface, if there are any drops of sweat on it. Use a soft, absorbent cloth. Do not use solvents to clean the user interface surface.
- :: Protect the user interface from excess sunlight: it may fade the colours of the user interface box and surface membrane.
- :: Please contact your dealer immediately if you notice any defects or malfunctions while using your T.I.E. interface. Please state the nature of the problem, conditions of use, purchase date and serial number of your T.I.E. interface. The location of the serial number sticker is shown on the inside cover.
- :: At the end of this manual, you'll find a diagram and list of spare parts for the Alpha 200.
- :: T.I.E. user interfaces meet the requirements of the EU's EMC Directives on electromagnetic compatibility (89/336/EEC) and electrical equipment designed for use within certain voltage limits (73/23/EEC). This product therefore carries the CE label.

NOTE! The instructions must be followed carefully in the assembly, use and maintenance of your equipment. The warranty does not cover damage due to negligence of the assembly, adjustment and maintenance instructions described herein. Changes or modifications not expressly approved by Tunturi Oy Ltd will void the user's authority to operate the equipment!

Due to our continuous policy of product development, Tunturi reserves the right to change specifications without notice.

We wish you many enjoyable training sessions with your new Tunturi training partner!